

**Institutional Barriers Hampering Least-Cost Approach to Transmission Planning
A Start
(In no particular Order)**

Barrier	Description	MW Held Up	Easy to Remove?
1 Chinese wall between distribution and power in utilities, incl. BPA.	Inability to communicate freely between power and distribution and transmission business lines within a utility makes it more difficult to put together a comprehensive plan for serving loads. An RTO would help smooth over this barrier, or perhaps, a non-wires group within a utility, but outside of any other established business line, reporting directly to the CEO.		
2 Lost revenues for BPA and distribution utilities (DUs).	Any power saved at the end users facility will raise the rates charged by distribution utilities and transmission business lines, even as total costs are reduced. A mechanism (like decoupling profits from throughput) might have to be created to allow a utility to profit from doing what's right for ratepayers as a whole.		
3 Lack of incentives for DUs to do accurate forecasting.	TBL builds transmission based on peak load forecasts of customer utilities, including IOUs, but utilities pay only for what they ultimately use. Distribution utilities have incentive to forecast high, because this gives them a safety net, and more freedom in serving their loads at no cost to them.		
4 DUs position between TBL and end users.	Many of the non-wires solutions contemplated are, or would be, controlled by end users of power. But TBL has no working relationship with these end users. The working relationship is between the distribution utility and the end users. If TBL wants to work with end users to effect non-wires solutions, and the utility does not want to, because of lost revenue, e.g., it may be a showstopper. TBL (or other transmission provider), the end user, and the distribution utility have to be able to work together to determine the overall value of non-wires alternatives, and to implement a strategy to acquire them.		

<p>5 Lack of transparency in transmission planning process and how non-wires alternatives can be employed.</p>	<p>Currently transmission planning takes place without a good understanding of what could be done as an alternative to a transmission line. Transmission planners are reactive. If loads are forecast to grow, or if generators want to be hooked up to the grid, transmission is built to accommodate the “needs.” As such h, transmission folks do not know what opportunities reside on the customer side of the meter, or with generation more strategically placed within the grid or distribution system. Better communication with distribution customers and their customers might make transmission planning more transparent and more receptive to new and innovative ideas.</p>		
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6	TBL's requirement to provide wires for generators regardless of location.	As above, transmission planning is reactive. If TBL could "suggest" strongly, and perhaps, give monetary incentives to owners of generation to site their plants in a more favorable area within the grid, transmission capital could be saved.		
7	Inaccurate peak-load price signals for energy and T&D for most customers.	Most end use customers pay average power and T&D rates. If they were to see the real price of serving loads at all times, they would undoubtedly adjust consumption to use power when the price of delivered power was low, and use less when it was high. This would have the effect of lowering peak loads (because power and T&D cost are high when the loads are high), and taking capital costs out of the system.		
8	Multiple regulatory jurisdictions for both IOU and POU.	TBL sells transmission to public and IOUs. TBL has its rates approved by FERC. IOUs have their rates approved by state regulators, sometimes in multiple states, and publicly owned utilities have their own boards. Working through all of this political structure will be a challenge		
9	Who funds measures? Who implements? Different players from G to D, to end-use.	Non-wires solution to transmission can take costs out of the delivery system all the way from the generator through to the end users. So, who pays for the measure? Distribution investments may be three times transmission investments. If we save transmission capital, how much distribution capital do we save and where? How should the costs be split? If siting a plant strategically saves transmission, but costs the plant owner, who pays? What if it lowers power costs to distribution utilities? Are there incentives that have to be paid to end users to adopt transmission saving measures? Finally, who delivers? This may be something that is decided as we address issues, above.		
10	Some people are uncertain about the reliability and persistence of	Certainty about the reliability and persistence of measures will not come until more people have experience with the measures. Experience with the measures will not be widespread until we resolve some of the barriers. Also, we may need to provide pilot projects to prove out the effectiveness of some of the measures proposed.		

measures.			
11 Lack of uniform, simple and fair interconnection standards for dg.	Many utilities in the past have been reluctant to allow distributed generation in their service territories, because they resulted in loss of control and lost revenue. As a result effective barriers were constructed to keep dg from being a key player. Other more legitimate reasons for wanting to keep control over dg were the safety issues related to dg's interface with the rest of the distribution system. Downed lines could be energized by dg systems without the correct instrumentation. FERC has a NOPR on interconnection standards that is in play now.		
12 Multiple ownership of contiguous elements of the grid.	It is possible for load reductions to create congestion. For example, if eastern coal is serving a 500 MWe load in Spokane, and that load (or part of that load) goes away, there may be no place for the saved eastern coal-fired power to go, even if it were the least costly resource on the grid.		
13 State of flux of industry (e.g. SMD and RTO)	The future in this region looks very different with and without an RTO. But, in the NW it is not at all clear how the future will unfold relative to an RTO. One approach would be to stay with the current system. Another is to adopt FERC's SMD features under an RTO. A third might be to take what is good for this region out of SMD, and have a regional approach that is somewhere in between the SMD and today's practice, and recognizes the realities imposed on the system by the hydropower system.		
15. Sponsors of targeted baseload energy efficiency measures potentially capable of delivering grid	Conservation measures have been installed in this region in volume since the 1980s. But, very seldom where they ever credited for the reduced congestion and increased reliability benefits that accompanied their installation. Under FERC's SMD they would get credit if certified. As the Round Table proceeds, we need to figure out the benefits that accrue to conservation measures of various types, and to enable entrepreneurs to reap those benefits through their programs.		

<p>congestion and reliability benefits cannot capture any of the associated economic value.</p>			
<p>16. Nationwide, a crisis of confidence throughout the financial community is suppressing capital investment in grid, generation and demand-side assets.</p>	<p>In part, because of uncertainty over the future structure of the electric utility, many people have been reluctant to invest in the industry. During the crisis 2000-2001, many plants were started and many more were planned, but after the bottom fell out of the market, it has been difficult to attract capital to this industry. Current high natural gas prices are not helping. As for T&D, uncertainty about the structure of the industry and the resulting technologies that may or may be spurred by it, create even more uncertainty. For example, if technologies develop that can manage peak easily and with little cost to end-users, the need for new transmission may be obviated.</p>		
<p>17. Inability of PF utilities to resell BPA power.</p>	<p>If distribution utilities or their customers could sell power that they saved, it would provide an incentive to adopt the kinds of non-wires solutions we are looking for. But, PF customers are prohibited from doing so, even though, I think, they can sell unused transmission. Customers of IOUs who do have access to the wholesale markets are similarly prohibited from selling saved power. Thus, the savings in both cases (other than foregone costs) would accrue to others.</p>		